

SAWFLY FAUNA OF A WOODED PARK WITHIN THE CITY OF EDINBURGH (Hymenoptera Symphyta)

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Introduction

From the spring of 1977 till the autumn of 1981, I lived very close to Corstorphine Hill (NT 2073), an area of wooded, public parkland in the north-western part of urban Edinburgh. Though not at first sight a promising locality in which to collect sawflies, my persistence finally rewarded me with the discovery of a number of interesting and local species, and produced a respectably large species list. Collecting involved sweeping and specific searching for adults and larvae. Determinations were made mostly from Benson (1951-1958).

In 1979, 1980 and 1981 I collected on Corstorphine Hill from early April till late August, on at least every second day except in the worst weather. Three visits were made in the spring of 1982. No collecting has been done in mid July.

Although I have published records of the rarer species elsewhere, the complete list is interesting in that it represents what I hope is the greater part of an evidently rather unusual local fauna, the composition of which has been greatly influenced by man. Most previously published faunistic work dealing with British Symphyta has concerned itself with larger areas and has been published in the form of county lists. Little information is available on areas of the limited size dealt with here. Whilst regional lists are of great interest, more detailed studies of smaller areas can reveal different aspects of the distribution and habitat requirements of a group of insects.

Description of surveyed area

The parkland area of Corstorphine Hill has an area of about 1.5km². This includes fields for grazing and areas of mown grass provided for general recreation, but does not include the Edinburgh Zoological Gardens nor the private golf course, which were not investigated. The hill rises gently to a maximum altitude of 530ft. (160m.) above sea-level. Local geology is uncomplicated: the survey area lies on a much eroded volcanic plug of dolerite. Soil is thin on parts of the hill's summit and the markedly striated rock exposed.

On all sides of the park there are residential areas, mostly with gardens. These areas are "smoke controlled", ie. only smoke-

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less fuels may be burned. This at least limits the amount of carbon deposited on leaves. No effects of pollution are obvious: greater problems seem to be erosion caused by the large number of pedestrians, and more seriously, damage to trees caused by non-accidental fires. Dutch Elm disease has killed a large number of hosts in recent years.

The larger area of Corstorphine Hill is dominated by amenity woodland planted in the 18th and 19th centuries. This contains large numbers of Lime (*Tilia*), Beech (*Fagus sylvatica*), Sessile and pedunculate Oaks (*Quercus*), Elms (*Ulmus*), Sycamore (*Acer pseudoplatanus*), Ash (*Fraxinus excelsior*), and smaller numbers of many others. On the western side there is a completely neglected walled garden, overgrown with Raspberry (*Rubus idaeus*), Bramble (*R. fruticosus*), Broad-leaved Dock (*Rumex obtusifolius*), Umbelliferae and Gramineae. Above this is an area of long derelict meadow dominated by sizeable trees and bushes of Hawthorn (*Crataegus*) with a few young Rowans (*Sorbus aucuparia*), Silver Birch (*Betula pendula*), Larch (*Larix*) and Cherry (*Prunus padus*). Along the length of the relatively broad top of the hill are several areas where the soil is too thin for the larger tree species. Several groups of Scots Pine (*Pinus sylvestris*), Silver Birch, and Willows (*Salix caprea* and *S. atrocinerea*) are to be found here. One stand of Alder (*Alnus glutinosa*) grows where a spring reaches surface. In separate localities there are even a very few plants of Blaeberry (*Vaccinium myrtillus*) and Hazel (*Corylus avellana*). Plants such as these are presumably the last indicators of the plant communities existing before broad-leaved trees were extensively planted. Probably Corstorphine Hill was originally dominated by Oak, with a little Willow, Birch and Hazel.

Other plants range from vetches, plantains, hawkweeds and buttercups in the open grassy areas to Rosebay willow-herb, *Sambucus*, a variety of ferns, and the aliens Japanese Knotweed and *Rhododendron* in the more shady parts. Between the zoological gardens and the golf course is found the only extensive area of unmanaged grassland, on part of which is an isolated wet flush no more than 10m², in which grow Soft Rush (*Juncus effusus*) and Cuckoo Flower (*Cardamine pratensis*). Round this have seeded many young trees of Grey Poplar (*Populus canescens*).

Older conifers are not frequent, apart from Scots Pine, but a number of young Larch, (*Larix*), Spruce (*Picea*) and Hemlock (*Tsuga*) has recently been planted.

List of Species

A = Adults

L = Adults reared from Larvae

LM = Leaf-Mines

Nomenclature follows Benson (1951-1958), except where names are preceded by an asterisk

SPECIES	NUMBERS OF SPECIMENS				KNOWN OR PROBABLE LOCAL HOSTPLANT(S)
	1	2-5	5-10	10	
<i>Xyela julii</i> (Breb.)				A	<i>Pinus sylvestris</i> L.
<i>Pamphilius hortorum</i> (Kl.)		A			<i>Rubus idaeus</i> L.
<i>P. sylvaticus</i> (L.)	A				Polyphagous: shrubs & trees
<i>Calameuta pallipes</i> (Kl.)		A			?
<i>Heptamelus ochroleucus</i> (Steph.)	A				Ferns
<i>Strombocerus delicatulus</i> (Fall.)				A	Ferns
<i>Strongylogaster macula</i> (Kl.)	A				Ferns
<i>Birka cinereipes</i> (F.)	A				<i>Myosotis</i>
<i>Dolerus liogaster</i> Thom.			A		Gramineae
<i>D. gonager</i> F.				A	Gramineae
<i>D. asper</i> Zdd.		A			Gramineae
<i>D. nitens</i> Zdd.			A		Gramineae?
<i>D. possilensis</i> Cam.	A				Gramineae?
<i>D. niger</i> L.		A			Gramineae
<i>D. aeneus</i> Htg.				A	Gramineae
<i>D. sanguinicollis</i> Kl.		A			Gramineae
<i>D. picipes</i> Kl.		A			Gramineae
<i>D. nigratus</i> Mull.		A			Gramineae
<i>Heterarthrus aceris</i> (Kalt.)	A			LM	<i>Acer pseudoplatanus</i> L.
<i>H. nemoratus</i> (Fall.)		A			<i>Betula</i>
<i>Athalia glabricollis</i> Thom.	A				Cruciferae
<i>A. cordata</i> Lep.		A			Labiatae
<i>A. liberta</i> (Kl.)	A				Cruciferae
<i>Empria tridens</i> (Knw.)		A			<i>Rubus idaeus</i> L.
<i>Caliroa cerasi</i> (L.)		A			Polyphagous: trees & shrubs
<i>Eutomostethus luteiventris</i> (Kl.)		A			<i>Juncus effusus</i> L.
<i>Monopadmus pallescens</i> (Gmel.)		A			<i>Ranunculus</i>
<i>Ardis brunniventris</i> (Htg.)	A				<i>Rosa</i>

<i>Blennocampa pusilla</i> (Kl.)				A	<i>Rosa</i>
<i>Parna tenella</i> (Kl.)				LM	<i>Tilia</i>
<i>Scolioneura betuleti</i> (Kl.)		A			<i>Betula</i>
<i>Messa glaucopis</i> (Knw.)		A	LM		<i>Populus canescens</i> (Ait.) Sm.
<i>Fenusa ulmi</i> Sund.		A			<i>Ulmus</i>
<i>F. dohrmii</i> (Tisch.)	A				<i>Alnus</i>
<i>Aglaostigma aucupariae</i> (Kl.)				A	<i>Galium</i>
<i>A. fulvipes</i> (Scop.)			A		<i>Galium</i>
<i>Tenthredopsis litterata</i> (Geoff.)			A		Gramineae
<i>T. nassata</i> (L.)				A	Gramineae
<i>Rhogogaster punctulata</i> (Kl.)		A			Polyphagous: trees & <i>Rubus</i>
<i>Tenthredo maculata</i> Geoff.		A			Gramineae
<i>T. livida</i> L.				A	highly Polyphagous
<i>T. balteata</i> Kl.	A				Polyphagous?: <i>Hypericum</i> & <i>Pteridium</i>
<i>T. colon</i> Kl.				A	highly Polyphagous
<i>T. obsoleta</i> Kl.	A				Polyphagous: herbaceous plants
<i>T. mesomelas</i> L.				A	Polyphagous: herbaceous plants
<i>Pachyprotasis rapae</i> (L.)		A			highly Polyphagous
* <i>Priophorus morio</i> (Lep.)	A				<i>Rubus idaeus</i> L.
<i>P. pallipes</i> (Lep.)		A			Polyphagous: mainly <i>Betula</i>
* <i>P. rufipes</i> (Lep.)	A				<i>Ulmus</i>
<i>Hoplocampa alpina</i> (Zett.)			A		<i>Sorbus aucuparia</i> L.
<i>H. pectoralis</i> Thom.		A			<i>Crataegus</i>
<i>H. chrysorrhoea</i> (Kl.)			A		<i>Prunus padus</i> ?
<i>Hemichroa australis</i> (Lep.)	A				<i>Betula</i>
<i>Platycampus luridiventris</i> (Fall.)		A			<i>Betula</i>
<i>Dineura virididorsata</i> (Retz.)				A	<i>Betula</i>
<i>D. stilata</i> (Kl.)		A			<i>Crataegus</i>

<i>D. testaceipes</i> (Kl.)		A		<i>Sorbus aucuparia</i> L.
<i>Pseudodineura fuscata</i> (Kl.)		A		<i>Ranunculus</i>
<i>Pristiphora pallipes</i> (Lep.)		A		<i>Ribes</i>
<i>P. ruficornis</i> (Ol.)		A		<i>Betula</i>
<i>P. laricis</i> (Htg.)			A	<i>Larix</i>
<i>P. denudata</i> Knw.		A		<i>Sorbus aucuparia</i> L. or <i>Rubus idaeus</i> L.?
* <i>P. lanifica</i> (Zdd.)		A		<i>Salix caprea</i> L.
<i>P. wesmaeli</i> (Tisch.)	A			<i>Larix</i>
* <i>Sharliphora amphibola</i> (Forst)		A		<i>Picea</i>
<i>Amauronematus amplus</i> Knw.	L			<i>Betula</i>
<i>A. humeralis</i> (Lep.)		A		<i>Salix atrocinerea</i> Brot.
<i>Nematinus luteus</i> (Pzr.)	A			<i>Alnus</i>
<i>Euura mucronata</i> (Htg.)			A	<i>Salix atrocinerea</i> Brot. & <i>caprea</i> L.
* <i>Phyllocolpa leucosticta</i> (Htg.)			A	<i>Salix atrocinerea</i> Brot.
<i>Pontania bridgmanii</i> (Cam.)			A	<i>Salix atrocinerea</i> Brot. & <i>caprea</i> L.
<i>P. proxima</i> (Lep.)		L	A	<i>Salix alba</i> L.
<i>Croesus septentrionalis</i> (L.)		L		<i>Alnus</i>
<i>Nematus lucidus</i> (Pzr.)			A	<i>Crataegus</i>
<i>N. leucotrochus</i> Htg.	A			<i>Ribes uva-crispa</i> L.
<i>N. myosotidis</i> Fall.		A		<i>Trifolium</i> & <i>Onobrychis</i>
<i>N. viridescens</i> Cam.		A		<i>Betula</i>
<i>N. melanaspis</i> Htg.		A		<i>Salix</i> & <i>Betula</i>
<i>N. bergmanni</i> Dahl.		A		<i>Salix</i>
<i>N. viridis</i> Steph.	A			<i>Betula</i>
<i>N. oligospilus</i> Forst.		A		<i>Salix</i>
<i>Pachynematus scutellatus</i> (Htg.)			A	<i>Picea</i>
<i>P. montanus</i> (Zdd. & Br.)		A		<i>Picea</i>
<i>P. obductus</i> (Htg.)	A			Gramineae
<i>P. rumicis</i> (L.)	A			<i>Rumex</i>
<i>P. moerens</i> (Forst.)		A		Gramineae
<i>P. apicalis</i> (Htg.)		A		Gramineae
<i>P. clitellatus</i> (Lep.)		A		Gramineae

(To be continued)